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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,849	10/15/2001	Raouf Botros	SDP274PA	3817

7590 05/16/2003

Law Office of Barbara Joan Haushalter
228 Bent Pines Court
Bellefontaine, OH 43311

EXAMINER

SHOSHO, CALLIE E

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 05/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/977,849

Examiner

Callie E. Shosho

Applicant(s)

BOTROS, RAOUF

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6 and 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) Claim 6 recites that the concentration of the solvent dye is "about 1% to about 10% dry base". The scope of the claim is confusing because it is not clear what is meant by dry base. Similar question arises in claim 9 which recites the same language.

(b) Claims 10 and 11 recite "DMEA" and TEA" respectively. In order to avoid confusion in the scope of the claims, it is suggested that the actual chemical names and not the abbreviations be used in each of the claims.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for

patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-9, 11, and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Taniguchi et al. (U.S. 5,667,572).

Taniguchi et al. disclose ink jet ink comprising 0.5-20% solvent dye such as Solvent Black 28 and Solvent Black 29, 0.1-20% styrene-acrylate copolymer, water, methyl ethyl ketone, pH adjustor, triethanolamine, and rust preventative (col.2, lines 19-20, col.4, lines 58-61, col.7, lines 60-61, col.8, lines 24-25, 52-54, and 62, and col.9, line 22).

Given that Taniguchi et al. disclose solvent dye identical to those presently claimed, i.e. Solvent Black 28 and Solvent Black 29, it is clear that the dyes would inherently possess same tolerance to water and solubility in solvent as presently claimed.

In light of the above, it is clear that Taniguchi et al. anticipate the present claims.

5. Claims 1-3, 5-9, 12, and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Zhu (U.S. 5,889,083).

Zhu discloses ink jet ink for printing on nonporous substrate wherein the ink comprises 0.1-10% solvent dye such as Solvent Black 29, 1-40% styrene-acrylic copolymer, volatile solvent such as ketone, and pH adjustor. It is disclosed that the pH of the ink is 7-10 (col.3, lines 16-17, col.4, lines 20-21 and 39-46, col.5, lines 40-56, col.6, lines 31-42, col.8, line 47, and col.10, line 64-col.11, line 8).

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Given that Zhu discloses solvent dye identical to those presently claimed, i.e. Solvent Black 29, it is clear that the dye would inherently possess same tolerance to water and solubility in solvent as presently claimed.

In light of the above, it is clear that Zhu anticipates the present claims.

6. Claims 1-2, 6, 8-12, and 14-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Naruse et al. (U.S. 2002/0112641).

Naruse et al. disclose ink jet ink comprising 0.1-10% oil-soluble dye, methyl ethyl ketone, 0.1-20% acrylic polymer including those obtained from styrene and acrylic, pH adjustor such as dimethylethanolamine or triethanolamine, and anti-rusting agent. It is disclosed that the ink has pH of 7-10 (paragraphs 17, 98, 105, 111-112, 126, 141, and 145).

In light of the above, it is clear that Naruse et al. anticipate the present claims.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi et al. (U.S. 5,667,572), Zhu (U.S. 5,889,083), or Naruse et al. (US 2002/0112641) any of which in view of Yang (U.S. 5,825,391).

The disclosures with respect to Taniguchi et al., Zhu, and Naruse et al. in paragraphs 4, 5, and 6, respectively, are incorporated here by reference.

The difference between Taniguchi et al., Zhu, or Naruse et al. and the present claimed invention is the requirement in the claim of denatured alcohol.

Yang, which is drawn to ink jet ink, discloses the equivalence and interchangeability of ketone solvent, as disclosed by Taniguchi et al., Zhu, or Naruse et al., with denatured alcohol as presently claimed (col.3, lines 57-63).

In light of the above, it would have been obvious to use denatured alcohol as the solvent in the ink of Taniguchi et al., Zhu, or Naruse et al., and thereby arrive at the claimed invention.

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi et al. (U.S. 5,667,572), Zhu (U.S. 5,889,083), or Naruse et al. (US 2002/0112641) any of which in view of Yatake (U.S. 6,454,846).

The disclosures with respect to Taniguchi et al., Zhu, and Naruse et al. in paragraphs 4, 5, and 6, respectively, are incorporated here by reference.

The difference between Taniguchi et al., Zhu, or Naruse et al. and the present claimed invention is the requirement in the claim of fluorosurfactant.

Taniguchi et al., Zhu, and Naruse et al. each disclose the use of surfactant, however, there is no disclosure of fluorosurfactant as presently claimed.

Yatake, which is drawn to ink jet ink, discloses the use of fluorosurfactant in order to regulate penetration of ink into substrate or to regulate the surface tension of the ink (col.8, lines 44-49 and col.9, lines 3-4).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use fluorosurfactant in the ink of Taniguchi et al., Zhu, or Naruse et al., and thereby arrive at the claimed invention.

10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhu (U.S. 5,889,083) in view of Taniguchi et al. (U.S. 5,667,572).

The disclosure with respect to Zhu in paragraph 5 above is incorporated here by reference.

The difference between Zhu and the present claimed invention is the requirement in the claims of specific type of dye.

Zhu discloses the use of solvent dye such as Solvent Black 29, however, there is no disclosure of Solvent Black 28.

Taniguchi et al., which is drawn to ink jet ink, disclose the equivalence and interchangeability of solvent dye such as Solvent Black 29 with Solvent Black 28 as dyes that

produce prints with excellent water fastness and light fastness (col.2, lines 19-24 and col.4, lines 58-61).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use Solvent Black 28 as the dye in the ink of Zhu in order to produce ink with excellent water fastness and light fastness, and thereby arrive at the claimed invention.

11. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhu (U.S. 5,889,083) in view of Taniguchi et al. (U.S. 5,667,572).

The disclosure with respect to Zhu in paragraph 5 above is incorporated here by reference.

The difference between Zhu and the present claimed invention is the requirement in the claims of corrosion inhibitor.

Taniguchi et al., which is drawn to ink jet ink, disclose additives used in ink jet inks to improve various properties of the ink include corrosion inhibitor (col.8, lines 47-50 and 54).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use corrosion inhibitor in the ink of Zhu in order to prevent the ink from rusting the printer apparatus, and thereby arrive at the claimed invention.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

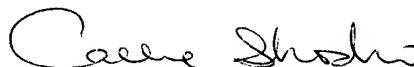
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Yamada et al. (U.S. 5,302,631) disclose ink jet ink comprising solvent, dye, acrylic polymer, and volatile solvent, however, there is no disclosure of pH modifier as presently claimed.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Callie E. Shosho
Examiner
Art Unit 1714

CS
May 13, 2003